

m



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/939,672	08/28/2001	Toshiyuki Hirota	WN-2345	4866

466 7590 03/25/2004

YOUNG & THOMPSON
745 SOUTH 23RD STREET 2ND FLOOR
ARLINGTON, VA 22202

EXAMINER

LUU, THANH X

ART UNIT PAPER NUMBER

2878

DATE MAILED: 03/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/939,672

Applicant(s)

HIROTA, TOSHIYUKI

Examiner

Thanh X Luu

Art Unit

2878

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 January 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-5,7-9 and 11-18 is/are pending in the application.
- 4a) Of the above claim(s) 15,17 and 18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-5,7-9 and 11-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 August 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule-17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 012004.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

This Office Action is in response to amendments and remarks filed January 21, 2004. Claims 1, 3-5, 7-9 and 11-18 are currently pending.

Election/Restrictions

1. Newly submitted claims 15, 17 and 18 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: the claimed invention does not require any peer-to-peer connection.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 15, 17 and 18 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the peer-to-peer connection via a transmission line; and the transmission line and switcher in Fig. 8 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claim 8 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. It appears that Applicant has failed to describe an embodiment having a peer-to-peer connection via a transmission line in combination with having optical communication between the processing elements. Fig. 8 is described as an embodiment using optical communication. There is no mention of a transmission line in the optical communication embodiment of the invention. If in fact there is a peer-to-peer transmission line, it is also unclear if the transmission line is optical or electrical, and wherein the transmission line is located.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1, 3-5, 7, 13 and 14 are rejected under 35 U.S.C. 102(e) as being anticipated by Winegarden et al. (U.S. Patent 6,467,009).

Regarding claims 1, 3-5, 7, 13 and 14, Winegarden et al. disclose (see Figure 2) an LSI semiconductor device, comprising: a plurality of processing elements (210, 220, 230); and a single switcher (225) that connect each of the plural processing elements to each other; wherein each of the plural processing elements includes a network interface (arrows) and is connected to the single switcher via the network interface, wherein the plural processing elements are located at a plurality of sides of the single switcher, wherein one of the plural processing elements (220) and the single switcher are connected by a peer-to-peer connection via at least one transmission line, and since there is a connection path between the plural processors, it forms a system LSI.

Winegarden et al. also disclose (see Figure 2) an LSI semiconductor device, comprising: a plurality of LSI peripheral input/output processing elements (210, 230); a core processor (220); and a single LSI switcher (225) that connects each of the plural peripheral processing elements and the core processor together as claimed.

Winegarden et al. also disclose the elements are implemented in a single semiconductor chip or package (see Figure 1) to form a chip LSI. Since the processing elements are connected directly to the switcher, the elements have a function of the same hierarchical level.

7. Claims 1, 3-5, 7 and 13 are rejected under 35 U.S.C. 102(e) as being anticipated by Nguyen et al. (U.S. Patent 6,154,051).

Regarding claims 1, 3-5, 7 and 13, Nguyen et al. disclose (see Figure 1) an LSI semiconductor device, comprising: a plurality of processing elements (141-144); and a single switcher (150) that connect each of the plural processing elements to each other; wherein each of the plural processing elements includes a network interface (145) and is connected to the single switcher via the network interface, wherein the plural processing elements are located at a plurality of sides of the single switcher, wherein one of the plural processing elements and the single switcher are connected by a peer-to-peer connection (denoted by double-ended arrows) via at least one transmission line, and since there is a connection path between the plural processors, it forms a system LSI. Nguyen et al. also disclose the elements are implemented in a single semiconductor chip or package to form a chip LSI. Since the processing elements are connected directly to the switcher, the elements have a function of the same hierarchical level.

8. Claims 9, 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Winegarden et al.

Regarding claims 9, 11 and 12, Winegarden et al. disclose the invention as set forth above. Winegarden et al. do not specifically disclose a plurality of chips each having the processing elements and a single switcher and an inter-switcher as claimed. However, it is notoriously well known in the art to provide additional chips and to connect the chips to provide increased processing power. Further, it is a matter of design choice how the inter-switcher is implemented. It would have been obvious to a person of ordinary skill in the art at the time the invention was made add a plurality of

chips and connect them together in the apparatus of Winegarden et al. in view of AAPA to obtain a more powerful processing device. Further, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide the inter-switcher on one of the chips in the apparatus of Winegarden et al. to provide a more integral and compact configuration.

Response to Arguments

9. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

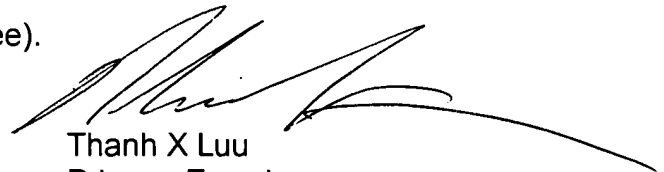
10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanh X Luu whose telephone number is (571) 272-2441. The examiner can normally be reached on M-F (6:30-4:00) First Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Porta can be reached on (571) 272-2444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Thanh X Luu
Primary Examiner
Art Unit 2878